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tied up hard and short like a horse taile, bound close with a fillet which they say makes it grow the faster, they are not a little phantastical or custom-sicke in this particular : their boyes being not permitted to weare their haire long till sixteen yeeres of age, and then they must come to it by degrees : some being cut with a long foretop, a long locke on the crowne, one of each side of his head, the rest of his haire being cut even with the scalpe : the young men and souldiers were their haire long on the one side, the other side being cut short like a screw ; other cuts they have as their fancy befooles them, which would torture the wits of a curious Barber to imitate. But though they be thus wedded to the haire of their head, you cannot woe them to weare it on their chins, where it no sooner growes, but it is stubbed up by the rootes, for they count it as an unusefull, cumbersome, and opprobrious excrement, insomuch as the call him an *English* mans bastard that hath but the appearance of a beard, which some have growing in a staring fashion, like the beard of a Cat, which makes them the more out of love with them, chusing rather to have no beards than such as would make them ridiculous.”



FOR THE NORTH-AMERICAN JOURNAL.

Explanation of the Musical Scale.

Sir,

A friend of mine, for the instruction of his daughter, composed the enclosed account of the origin of the Musical Scale, and of the grounds on which it is constructed. The subject is an abstruse one, but I think is so clearly explained here, that any person desirous of instruction, may comprehend it with a little attention. As a general fondness for musick prevails in this country, and no house is without musical instruments of some kind, it may perhaps be a satisfaction to some young persons, to obtain a knowledge of the theory of harmony. For this purpose, I procured leave to make the copy I enclose, which I place at your disposal.

B.

To the Editor.

March 20th, 1816.

My dear Daughter,

You doubtless remember, that during your last vacation, while amusing a circle of friends at the piano-forte, the questions were asked, by whom was the Scale of Musick now in use formed, and why was it divided in the manner we find it? These queries excited an interest in all present; but, although much was said on the subject, nothing was in fact explained. My own ideas were much confused on those points, but what was then said determined me to look into the subject; which I have done, sufficiently to satisfy at least my own curiosity. It is a subject, in some parts rather abstruse, and a reference to many books is necessary to a tolerable understanding of it; or at least it has been so with me.* As you exhibited, on the occasion alluded to, a very laudable inquisitiveness, and as this branch of musical knowledge is seldom expounded by practical teachers, I shall endeavour to unfold it to you, as promised; and in a manner more simple than I have been fortunate enough to meet with it myself; and which a little reflection will enable you to comprehend. If in doing this, I seem rather to mingle history with theory, it is because the matter appears to me better illustrated in that form.

Before entering on the subject, however, it may be best to explain the meaning of some terms, which must of necessity be used. *Harmony* is defined to be the coexistence of two or more sounds, when pleasing to the ear, or the pleasing effects of them when sounding together; in which sense it is nearly synonymous with concord; others, however, define it to mean a pleasing *succession* of such concords: I shall use the word, however, in the former sense.

* The theory of harmony, which explains the last of these points, is the only branch of musical knowledge, perhaps, that can be said to partake of science; the practical part, or that of performance, is merely an act, and may be skilfully executed without any acquaintance with the theory. This, indeed, is a matter of mere speculative inquiry, but at the same time is highly curious. Most treatises on musick blend so much its theory with its practice, and contain so many refinements of science that cannot be comprehended, and of harmony that cannot be felt by a new inquirer, that he is repulsed by difficulties at the very threshold, and gets hardly a glimpse of the beautiful structure of the interior.

Melody is a pleasing succession of single sounds ; harmony is produced when you play both bass and tenor on your piano ; and melody when you play the air only, without accompaniment. The pleasing effect of melody itself, however, is best explained, as Dr. Franklin remarks in a letter to Lord Kaimes,* on the principle of harmony ; for although each sound be single, yet to be pleasing it must harmonize with those preceding, the impression of which is retained in the mind ; musick being the effect of such risings or fallings in sound, as are agreeable to the ear, these are called by musicians *intervals* ; because a sort of space is left, or skipped over, in which many others might be placed. Between the notes C and D, for instance, on your piano, many other sounds might be placed, all higher than C and not so high as D, of which a good ear would distinguish at least twenty. As the rising or falling may be more or less, there are of course a great variety of these intervals ; thus from the note C to that of D, or in other words, the difference between them, is an interval called a tone ; and from E to F is a semitone. Among larger intervals there are what musicians call a 4th, which is equal to two tones and a semitone ; and the 5th, equal to three tones and a semitone ; and the octave, which is equal to five tones and two semitones, and so on.† You will thus, I hope, get a pretty good idea of what is meant by an interval in musick. It is proper perhaps to remark, that these sort of terms, the 4th, 5th, octave, &c. are used not only to denote intervals, but also as the names of notes or sounds situated at those distances apart ; thus F is called the 4th to C, G its 5th, and the next C above or below, is called its octave.‡ Musicians, in modern times, have

* In the Brit. Ency. this letter is quoted as being addressed to Dr. Price.

† An octave was called by the Greeks a diapason ; a 5th, diapente ; and a 4th, diatesseron.

‡ You probably know already, that sound, according to theory, and as far as we can judge by experience, is nothing more than a species of undulation in the air, caused by vibrations in sounding bodies ; which undulations our organs of hearing are fitted by nature to receive and appreciate ; when those vibrations are regular, technically termed, isochronous, the sound they create is musical ; but when irregular it is only a confused noise. Euler asserts, we cannot appreciate a sound of less than thirty, or more than seven thousand vibrations in a second ; this, however, is a sufficient compass, being nearly eight octaves.

agreed to designate the seven sounds, composing the octave, by the seven first letters of the alphabet, as A to G ; and it is the practice, the reason of which I have not seen explained, to begin the octave with C.

Whoever considers, that the number of different sounds is almost infinite, which might be placed between two notes, one an octave above the other, must naturally feel a strong desire to know why the precise number now in use was adopted ; or, in other words, why the octave was divided into seven notes, and why five of these are tones and two semitones ; or, as a question still antecedent to this in its nature, why the whole range of sounds, of which our voices or instruments are capable, should be first of all divided into octaves. The division of sounds, if no regard were had to harmony, would be purely arbitrary ; we might divide the whole compass of one voice, or any given part of it, in many ways different from that in use ; that is, we might admit many more, or much fewer notes within a certain compass than we now do ; or with the same number we might vary at pleasure their distances apart ; but as the chief end of musick is to please, if there are any sounds situated at a certain distance apart, through the whole range or compass, which harmonize remarkably with each other, we should agree upon such sounds as best calculated to produce the desired effect, that is, to please. Now this appears precisely the reason why sounds were first divided into octaves, and then further subdivided as they now are. The harmony or concord between two notes, an octave apart, is so peculiar that it forces itself, as it were, upon our notice ; and we almost take them to be the same note. What proves it to be naturally so, is, that if we wish to accompany any one in a song, and our voice is too low or too high, we imperceptibly and without thought, fall into the octave above or below the person we accompany ; and even then often are not aware we are not in the same pitch. Females usually sing an octave above men, and yet when singing together, how few are sensible this is the case. Indeed two sounds, just an octave apart, when they strike the ear approach so near to identity, that the division of sounds into octaves existed for ages, while the mode of dividing the octave itself was various. The cause of this peculiar harmony, as well as of those less striking, we shall see in the sequel.

The division of the octave, as we now have it, or in other words, the scale now in use, called the diatonick, was composed by the Grecian musicians, or perhaps taken by them partly from the Egyptians, after trying for ages various other divisions; it was formed gradually, by many successive approximations, and at last was universally assented to, as containing the most pleasing gradation of sounds of any that ever had been proposed; and we find it such at the present day.*

In determining the exact sound, which each of the seven notes ought to have, the Greek musicians were guided entirely by the ear; but in calculating the intervals left between them, they were governed by the length of the strings, which by experience they found necessary to produce them.

In regard to the vibrations of strings, upon which the theory of harmony is now explained, they appear to have known merely that long strings vibrated slower than short ones;† it did not, to be sure, escape the sagacity of some of the Greek musicians, to conjecture that the vibrations of strings were in the inverse proportion to their lengths; but this was at that time so far from being proved, that it does not seem to have been even generally believed, that there existed any such exact connexion or proportion.

For the discovery and demonstration of this very important fact in musical science, we are indebted to the illustrious Gallileo. He discovered and shewed the analogy between

* By Grecian musicians, I mean such of their philosophick and theoretick men, as turned their attention to this subject, and made it a matter of calculation. Among them may be mentioned Aristoxenes, Pythagoras, Didymus, Ptolemy, Euclid and many others; of these Pythagoras perhaps did more than any one, and as he resided many years in Egypt, there is reason to believe he acquired there some valuable ideas relating to musick. Indeed, in most scientifick matters, the Grecians were more indebted to the Egyptians, and other eastern nations, than is generally supposed, or than their admirers are always willing to admit.

† The rapidity of vibrations in the very slowest string, emitting an audible sound is much too great to be counted, and the state of mathematical science, at that time, was inadequate to a solution of the problem. In the hands of moderns, however, the powers of this sublime science have been so much extended, as to be capable of accomplishing this and numberless other objects, unattainable by the ancients.

the vibrations of strings, and the motions of pendulums ; and with the aid of mathematicks, he demonstrated, that the rapidity of vibration was precisely in the inverse proportion of the length ; that is, that strings vibrated faster exactly in proportion as they were shorter ; the thickness and tension being supposed the same.

He demonstrated also, that any string which sounds an octave above another, vibrates just twice as fast ; so that two vibrations of the higher, is made in the same time exactly, as one of the lower.

This remarkable coincidence being proved and abundantly confirmed since, the greatest that can possibly take place between two strings giving different sounds, it explained in a beautiful manner the charming concord of the octave, and led to the adoption of the theory, that all harmony depends on coincidence of vibrations.

I have before remarked, that universal experience has for ages approved of the diatonick scale now in use ; which divides the octave into seven notes or sounds, or in other words, which interposes six sounds between two others, just an octave apart.

It should be noticed here, that in dividing or fixing the sounds of an octave, we are obliged to use both extremes of it ; that is, in taking C as one sound and placing six others above, or between that and its octave C ; we are obliged to use this higher C, for otherwise we should not know if the highest sound of the six was placed at the proper distance from it ; therefore, although the octave consists only of seven notes, yet we are obliged to use eight in dividing it ; and it is from this circumstance it takes the name of octave. But this higher C, although used in this way, serves also as the commencement of another octave above, to which it in fact belongs. The universal approbation of the scale thus divided, and the theory of coincidence above stated, reciprocally justify and confirm each other ; for we shall find that the six sounds, thus interposed between two others an octave apart, coincide with each other and with the two extremes, in their vibrations to a remarkable degree, perhaps even in the greatest degree possible. This, perhaps, will be rendered more apparent, if instead of merely stating what these coincidences are, we should proceed as if we were forming a scale founded on this theory. Let us then search

for the most frequent coincidences of vibrations that we can imagine, and place the sounds accordingly ; and then notice as we proceed how they agree with those of the natural diatonick scale now in use, that is without flats or sharps. We will denote the first sound or key note C, as usual, and suppose it to make two hundred and forty vibrations per second, which is about what the lowest C but one on the piano really has ; the next C above, which may be distinguished in future by a small c, will of course make according to the theory four hundred and eighty vibrations ; every two vibrations of the latter, are therefore made in the same time, or coincide as to the time employed with every one of the former. The object now is, to place six sounds between these two. It is evident, there cannot be any whose vibrations would coincide (any given number of them) with each one of C, for if we took sounds vibrating as three or four to one of C, they would be far above our limits. We are forced, therefore, in seeking for the next most frequent coincidence, to take sounds that make a certain number or series of vibrations in the time that C makes two ; there is but one sound that will even do this, and that vibrates three to every two of C ; for if we took one making four to two of C, that would be the same as two to one, and would be its octave c ; and if we took five or more to every two of C, they would of course be too high : a sound, therefore, vibrating as three to two of C, is absolutely the only one within our limits, whose vibrations can agree with every two of C ; such a one vibrates one half faster than C, or three hundred and sixty times per second ; this is precisely the note now in use, designated by G, and forms with C the next most perfect concord to the octave ; as compared with C it is called a 5th, and leaves between them an interval of the same name. The ratio of its vibrations compared with C, is stated arithmetically 3-2.

This being the only sound within our limits, having a series of vibrations agreeing with every two of C, we are now constrained to seek for such, as will make a certain number while C makes three : of these there are but two, one vibrating four and the other five times while C vibrates three ; for if we take six to three, it will be its octave, and if seven or more to three it will be above ; so that we may be sure there are but these two within our limits that would agree with

every three of C; of these you will perceive, that the one vibrating as four to every three of C, must move one third faster, and therefore not so fast as the note G already fixed: this one is exactly the note designated F, and makes three hundred and twenty vibrations per second, C being always supposed to make two hundred and forty. It forms with C the concord called a 4th, and an interval between them of that name: its ratio with C is of course 4-3. The other sound, vibrating five times to every three of C, you perceive must move two-thirds faster, and is therefore higher than G; it is precisely the note A now in use, and vibrates four hundred times per second; it forms with C the concord called a 6th major, and leaves with it an interval of that name; its ratio is 5-3. We have thus found three sounds between C and its octave c, making each of them a certain number or series of vibrations, while C makes either two or three; and these being, to a certainty, the only ones of that description, we are now obliged, in searching for the next most frequent coincidence, to take such whose vibrations will agree with every four of C: the nearest of these we can possibly have, is one that makes five vibrations while C makes four; such a one moves of course but one quarter faster than C, and therefore not so fast as F; it is, in fact, the note E now in use; it vibrates three hundred times per second, forms with C the charming concord of the 3d major, and the interval between them bears that name.

These four sounds, E, F, G, A, interposed between C, &c. seem to divide the octave in the most harmonious way we can imagine; and thus far it appears we should have placed them upon our theory, exactly where we find them; but perhaps the two remaining sounds D and B we should have placed differently; indeed we certainly should, if we proceeded as hitherto, in searching for the next most frequent coincidence of vibrations;* we might take coincidences that would give us in D and B, the minor 3d and minor 7th with C; but the Grecians do not appear to have recognized these concords at all; whether, however, in placing D and B so as to produce these concords, instead of discords as they

* By this is meant, that possibly musicians of the present day, if they had to compose a scale, would have placed D nearer to E, and B nearer to A than they now are, so as to give with C the minor 3d and minor 7th.

are now generally esteemed, we should not have met with inconveniences enough to counterbalance it, may be doubted; one very considerable inconvenience is easily perceived, which is this, that instead of three kinds of intervals, which now are found between the eight notes, we should have had at least six: besides, we now command those concords by the intervention of flats and sharps, which is a contrivance of later years.

But let us proceed with the scale: on measuring the five intervals thus left, after placing these four sounds, the Grecians found that the intervals between C and E, and between A and c, were much greater than either of the others, though all as they now stood were different, the question then became how to divide these two largest; in doing this, they were not perhaps so much governed by the ear as by calculation. Almost the only concords, recognized at that time, or were then attainable by their imperfect instruments, being those of the 4th and 5th, which are formed by F and G sounding with C, and it having been found by the length of strings, the difference between these two sounds F and G was 1-8th, they seem to have taken this as a guide in fixing the sounds we now call D and B; and to have measured off from C and from A, a similar interval; that is to say, they placed a sound just as far above C, and another just as far above A as G is above F, and these sounds are the notes D and B now in use.* This manner of placing D and B had at least this happy and remarkable effect, it reduced the five intervals before existing, and all different, to three kinds; at the same time that it increased the number of them to seven, which you will see presently. The octave being thus completed, let us place in one view the ratio in vibrations which each bears to C, the last figures indicating those of C:

D	E	F	G	A	B	c
9-8	5-4	4-3	3-2	5-3	15-8	2-1

and by this we perceive at once, that the coincidence is by no means so great in D and B as in the others. It should have been before remarked, that D forms with C a discordant interval called a 2d, whose ratio with C is 9-8th; and B another discordant interval with C, called a 7th, whose

* See Burney's History of Musick, page 444.

ratio with C is 15-8th. Having stated the interval which each makes with C, or in other words the distance of each from C, let us now state the intervals between each as they rise. This I shall do, however, by placing over each note the proportionate rising in tone, or the increase in vibrations of each, beyond the note below or preceding it ; and by placing underneath the exact number of vibrations made by each in a second, it being supposed that C makes two hundred and forty ;

	1-8	1-9	1-15	1-8	1-9	1-8	1-15
C	D	E	F	G	A	B	c
240	270	300	320	360	400	450	480

by this you see that D rises one-eighth, or makes one-eighth more vibrations than C ; E makes one-ninth more than D, and so on ; and the correctness of this calculation is easily verified, for the result gives to c just twice the number of vibrations of C, which is precisely what it ought to have according to theory.

On comparing these ratios of increase one above another, you will find three kinds ; the smallest is that of 1-15th, as from E to F and B to C, and it being but little more than half either of the other ratios, these intervals from E to F and B to C, are called semitones major, or simply semitones ; the next ratio of increase is 1-9th, as from D to E and G to A, and these intervals are called minor tones ; the greatest ratio of increase is that of 1-8th, as from C to D, F to G, and A to B, and these intervals are called major tones. There are, therefore, these three sorts of intervals formed between one note and the next, in the natural diatonic scale, without flats or sharps ; and of these, as we have seen, there are three major tones, two minor tones, and two major semitones. These seven notes or sounds, which form the octave, are such as are produced by the white finger-keys on the piano-forte, beginning with one C, by which all the others are tuned, and ending with the next above ; and the whole range of white keys on such instruments are but a succession of octaves thus composed.

I have thus far spoken only of the pleasing concords, which are formed in this scale by sounding each with C, the original or key note ; but the beauties of musick would be extremely limited, if we could not rise harmoniously from either of the notes as well as from C, or if we could not

descend harmoniously as well as ascend. It is really, however, worthy of admiration, that in this scale we have nearly the same advantage in rising from most of the other notes as from C ; and as to descending, it is sufficient to remark, that any interval which is harmonious in rising is so also in falling. Indeed, in starting from the other notes, we can often get the pleasing concords of the 3d minor, 6th minor, and 7th minor, which we cannot get from C without flats or sharps, the use of which will be explained by and by. The ratios of vibrations of two strings or sounds, forming these minor concords, are as six to five, eight to five, and nine to five ; and the ratios of the other concords are before stated. Let us now take a view of the various concords, which form harmony when sounding together, or melody when in succession, that we can command rising from each note in the scale, when rigidly tuned ; bearing in mind that the 5th, 4th, 6th major, and 3d major have, next to the octave, the most frequent coincidences that can *possibly* be, as we have shown ; and that they present to the ear also the most perfect concords. In rising from each note we have the following concords, the notes in the octave above being marked in small letters :

C forms with E a 3d major, a 4th with F, 5th with G, and a 6th with A ;

D forms a 4th with G, and a 6th major with B ;

E forms a 3d minor with G, a 4th with A, a 5th with B, 6th minor with c, and a 7th minor with d ;

F forms a 3d major with A, and a 5th with c ;

G forms a 3d major with B, a 4th with c, a 5th with d, and a 6th major with e ;

A forms a 3d minor with c, a 5th with e, a 6th minor with f, and 7th minor with g ;

B forms a 3d minor with d, a 4th with e, and a 6th minor with g ;

all these concords we can form from each of these notes ; keeping within the scope of an octave from the note we begin at, and without using flats or sharps ; but with their use all others also would be at our command.* Besides the

* It appears by this, we could get but two concords within the compass of an octave, in rising from D or from F, without using flats or sharps ; which shows, that without the aid of these, harmony would be considerably limited. It ought in fairness to be remarked, that the

two semitones in the natural scale, which are more properly called major semitones, others are formed by an artificial contrivance of later years ; that is, by dividing the five major and minor tones : this is done by interposing five other sounds, called flats and sharps, which are distinguished on the piano, and such like instruments, by the black finger-keys. The five tones being thus divided into ten semitones, these together with the two before existing in the natural scale, compose the twelve successive half notes, of which every octave in the piano and such instruments now consists. These flats and sharps take their names from the contiguous note ; those above C, D, F and G are called sharps, and another half way below B is called B flat ; this is the way they are named ; but in reality sharps and flats are convertible terms, for a sharp to one note is also a flat to the next above ; by this contrivance we get every one of the concords, before enumerated, starting from each note, or from either of the flats or sharps themselves, which however we sometimes could not do without their aid ; from C, for instance, we get the 3d minor with D sharp, the 6th minor with G sharp, and 7th minor with B flat.

The semitones, however, which are obtained by dividing the five tones are not, strictly speaking, so great as the two semitones major in the natural scale ; nor, indeed, could the whole tones be exactly divided ; nor would they give the concords precisely that we seek for if they were ; for if we placed, for instance, a sharp to D just half ways between D and E, it would not be a perfect minor 3d with C ; and so with the 6th and 7th minor to C. This could be demonstrated by a calculation of the ratios of vibrations necessary to produce the various concords, and it is an imperfection inherent in this and probably every other scale that could be formed. It is this imperfection that renders necessary what is called temperament, by which we lessen a very little the semitones of the natural scale, and enlarge those formed by dividing the tones ; by which means all are brought nearer to an equality ; and the advantages of this are very important, for by thus altering these and some of the other

minor 7th, which I have considered a concord, is not generally allowed to be such ; but I am not enough in the practice of musick to know, whether its harmony is easily perceived or not ; it certainly ought to be, according to theory.

notes in the natural scale, scarcely so as to be perceived, we are enabled to command any concord from any note we please to start; and without which, although some might be more rigidly exact, yet others would be much less so. Of precisely the best mode of tempering instruments, musicians are not agreed; it is generally admitted, however, that the 5ths and most other concords will bear a little alteration, but the octaves none at all. The necessity of temperament may perhaps be better conceived, however, from the following circumstance; if we tune four 5ths upwards from C, and then from the highest point we arrive at, tune downwards two octaves, it will fall upon E; but if this tuning be rigidly exact, this E will not be an exact major 3d from C as it ought, but will be perceptibly too high; and this also the theory shows, for by calculation it would be about a tenth part of a tone major too high, which is a difference easily perceived by a good ear. Now as the octaves must be exact, either the major 3ds must be increased a little, and the 5ths decreased a little, or else the 5ths must be lessened all this difference; but as it can be divided among the four 5ths, making only a quarter part to each, this may be done without any perceptible want of harmony in each step, and this is the usual way. This alteration is temperament.*

I have thus endeavoured to exhibit, in as plain a way as I could, the pretty exact conformity of the diatonic scale to the theory of coincidence; but if, after all, I have not done it intelligibly, I know not where you could be better referred, than to Euler's letters to a German princess; where the subject may by some be better comprehended, under a different form.

I am aware, that some musicians think all harmony can be explained, on the doctrine of Fundamental Bass, as adopted and theorised by Rameau, an eminent French mu-

* It is a singular fact in musical science, that no harmonious interval, unless it consists of an even number of octaves, can be divided into two or more harmonious intervals equal to each other: we cannot, for instance, divide an octave or any smaller concord into halves, thirds, or quarters. Yet, however, it is worthy of remark, that they may be divided in various ways harmoniously, but unequally; thus, an octave is composed of, and may therefore be divided into a 4th and 5th; or into a 4th, 3d, and 3d minor; or 6th and 3d minor; or 3d and 6th minor; a 6th may be divided into a 4th and 3d; a 5th into a 3d and 3d minor, and so on.

sician of the last century. This doctrine is founded on a curious circumstance, first noticed by the same Gallileo; which is this, that every musical cord, besides the principal sound, gives out as that dies away, two other, higher sounds; which experienced ears acknowledge to be a 12th above, (or an octave to its 5th,) and a 17th, (or a double octave to its 3d major,) the former being first heard and afterwards the latter. These auxiliary sounds, which are called its natural harmonies, are however so faint and so high, as not to be distinctly perceived, except when the principal sound is a low one. Now the 12th above any sound vibrates, compared with that, exactly as three to one, and the 17th as five to one; and these coincidences are the greatest possible, next to the octave two to one, and the double octave four to one; and greater than can occur, between any two sounds within the compass of an octave. The fact, therefore, of a principal sound being attended by others, having in their vibrations such striking coincidences with it, seems to me rather a confirmation of our theory; and, indeed, a sort of natural exemplification of it. At any rate, however, these two doctrines, if they may be so called, do not militate; for D'Alembert, who has unfolded Rameau's system in a peculiarly lucid manner, resorts continually to ratios of vibrations; and thus, in some degree, blends the two doctrines together. This may be seen by reference to the article Musick, in the *Ency. Brit.*

You will observe, however, that all this theory is designed to establish, is, that a certain agreement in the vibrations of sounds, is necessary to render them either harmonious or melodious; to search further, and inquire why this agreement should produce this effect, would be a fruitless task; and we might as well ask, as an elegant writer remarks, why the perfume of a rose delights us, or the odour of a poppy disgusts; these are secrets nature will never disclose.

The perception of harmony, is with every person in a greater or less degree innate, but like the rest of our faculties, is susceptible of vast expansion by exercise. Almost every ear perceives the harmony of the octave, but a cultivated one can also appreciate every other concord designated by musicians; and not only feels a different degree, but perhaps also a different sort of pleasure excited by each. Attempts, indeed, have not been wanting, to characterise

and define their various pleasing impressions. The concord of the 5th is considered peculiarly sweet, that of the 3d is gay and exhilarating, the 3d minor plaintive, and so on with the others, each of which is said to inspire a peculiar feeling. But it seems more probable, that a cultivated ear may receive various impressions from the different concords, than that the same concord should produce a similar effect on many different individuals. Yet, however, the effect of some sorts of musick is pretty general; few persons, perhaps, are insensible to the soothing melancholy of the slow Scotch musick, or the enlivening gaiety of their dances; but again, how much of this is fairly attributable to a peculiar strain of melody, or how much to the various sorts of time and measure, is not easy to determine; on this point every practised ear must be its own judge, but one quite uncultivated can hardly judge at all.



Character of Mr. Sheridan.

[THE following character of Sheridan, is copied from the *Salem Gazette*, into which paper it was extracted from the *London Statesman*, and we have not observed it in any other of our papers. It is so well written, and with so much impartiality and discrimination, that it may be safely predicted, that no better account of this extraordinary man will ever be given in the same compass.]

“It is with deep regret we announce to our readers, the death of the right honourable RICHARD BRINSLEY SHERIDAN, who, after a severe and protracted illness, expired yesterday at noon, in the 65th year of his age.

“The various sensations under which we, with the rest of the world, contemplated the course of this extraordinary man while living, have been so far recalled to us by the recent event of his decease, that we cannot dismiss the account of it like a common-place article of the obituary. We do not strive to check the pangs of grief and pity, which mingle with our admiration for a lost son of genius. It is always interesting, whether gratifying or painful, to meditate the history of a distinguished man; and more especially of a man, from the materials of whose character even more of